

**SYSTEM AND METHOD TO AUTOMATE THE MANAGEMENT
OF HYPERTEXT LINK INFORMATION IN A WEB SITE**

ABSTRACT

A Web site management system uses a Web-crawler to traverse (i.e., crawl) Web sites on
5 the Internet. The Web-crawler identifies the Web pages accessible from each Web site and uses
the hypertext link information embedded in those Web pages to discern relationships between
the various Web pages. A change-detection and notification system analyzes the results from the
Web-crawler to determine whether a specific hypertext link is erroneous. The change-detection
and notification system creates an electronic mail message that includes a description of the
10 actions that may correct the erroneous hypertext link, a recommended action, and an attachment
to the electronic mail message that comprises a copy of the Web page after applying the
recommended action. If a subscriber registered the author of the Web page that contains the
erroneous link with the present invention, the change-detection and notification system sends the
electronic mail message to the author. If the author of the Web page is unknown, the change-
15 detection and notification system applies heuristic algorithms and performs a probabilistic
analysis to deduce an electronic mail address that will likely contact either the author or a person
responsible for managing the Web site that hosts the Web page.